

SEQUENCE LISTING

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<120> Method of Producing and Purifying Endostatin Protein

<130> 05213-0551US (43170-258385)

<140> US 10/070,560

<141> 2002-03-08

<150> 60/153,698

<151> 1999-09-14

<150> PCT/US00/25166

<151> 2000-09-14

<160> 12

<170> PatentIn version 3.1

<210> 1

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 1

tctctcgaga aaagacacag ccaccgcgac ttcca

35

<210> 2

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 2

atcgtctaga gcatccaggc ggtggctact

30

<210> 3

<211> 183

<212> PRT

<213> Homo sapiens

<400> 3

His Ser His Arg Asp Phe Gln Pro Val Leu His Leu Val Ala Leu Asn
1 5 10 15

Ser Pro Leu Ser Gly Gly Met Arg Gly Ile Arg Gly Ala Asp Phe Gln
20 25 30

Cys Phe Gln Gln Ala Arg Ala Val Gly Leu Ala Gly Thr Phe Arg Ala
35 40 45

Phe Leu Ser Ser Arg Leu Gln Asp Leu Tyr Ser Ile Val Arg Arg Ala
50 55 60

Asp Arg Ala Ala Val Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe
65 70 75 80

Pro Ser Trp Glu Ala Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro
85 90 95

Gly Ala Arg Ile Phe Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro
100 105 110

Thr Trp Pro Gln Lys Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg
115 120 125

Arg Leu Thr Glu Ser Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser
130 135 140

Ala Thr Gly Gln Ala Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln
145 150 155 160

Ser Ala Ala Ser Cys His His Ala Tyr Ile Val Leu Cys Ile Glu Asn
165 170 175

Ser Phe Met Thr Ala Ser Lys
180

<210> 4

<211> 549

<212> DNA

<213> Homo sapiens

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gggctggcgg	gcaccttccg	cgccttcctg	tcctcgcc	tgcaggacct	gtacagcattc	180
gtgcgcgtg	ccgaccgcgc	agccgtgccc	atcgtaacc	tcaaggacga	gctgctgttt	240
cccagctggg	aggctctgtt	ctcaggctct	gagggtccgc	tgaagccgg	ggcacgcattc	300
ttctcctttg	acggcaagga	cgtcctgagg	caccccacct	ggccccagaa	gagcgtgtgg	360
catggctcgg	accccaacgg	gchgaggtg	accgagagct	actgtgagac	gtggcggacg	420
gaggctccct	cggccacggg	ccaggcctcc	tcgctgctgg	ggggcaggct	cctggggcag	480
agtgcgcga	gctgccatca	cgcctacatc	gtgctctgca	ttgagaacag	cttcattgact	540
gcctccaag						549

<210> 5

<211> 182

<212> PRT

<213> Homo sapiens

<400> 5

His	Ser	His	Arg	Asp	Phe	Gln	Pro	Val	Leu	His	Leu	Val	Ala	Leu	Asn
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					5				10						15

Ser	Pro	Leu	Ser	Gly	Gly	Met	Arg	Gly	Ile	Arg	Gly	Ala	Asp	Phe	Gln
						20		25							30

Cys	Phe	Gln	Gln	Ala	Arg	Ala	Val	Gly	Leu	Ala	Gly	Thr	Phe	Arg	Ala
						35		40							45

Phe	Leu	Ser	Ser	Arg	Leu	Gln	Asp	Leu	Tyr	Ser	Ile	Val	Arg	Arg	Ala
							50	55			60				

Asp Arg Ala Ala Val Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe
65 70 75 80

Pro Ser Trp Glu Ala Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro
85 90 95

Gly Ala Arg Ile Phe Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro
100 105 110

Thr Trp Pro Gln Lys Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg
115 120 125

Arg Leu Thr Glu Ser Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser
130 135 140

Ala Thr Gly Gln Ala Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln
145 150 155 160

Ser Ala Ala Ser Cys His His Ala Tyr Ile Val Leu Cys Ile Glu Asn
165 170 175

Ser Phe Met Thr Ala Ser
180

<210> 6

<211> 181

<212> PRT

<213> Homo sapiens

<400> 6

His Ser His Arg Asp Phe Gln Pro Val Leu His Leu Val Ala Leu Asn
1 5 10 15

Ser Pro Leu Ser Gly Gly Met Arg Gly Ile Arg Gly Ala Asp Phe Gln
20 25 30

Cys Phe Gln Gln Ala Arg Ala Val Gly Leu Ala Gly Thr Phe Arg Ala
35 40 45

Phe Leu Ser Ser Arg Leu Gln Asp Leu Tyr Ser Ile Val Arg Arg Ala
50 55 60

Asp Arg Ala Ala Val Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe
65 70 75 80

Pro Ser Trp Glu Ala Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro
85 90 95

Gly Ala Arg Ile Phe Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro
100 105 110

Thr Trp Pro Gln Lys Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg
115 120 125

Arg Leu Thr Glu Ser Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser
130 135 140

Ala Thr Gly Gln Ala Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln
145 150 155 160

Ser Ala Ala Ser Cys His His Ala Tyr Ile Val Leu Cys Ile Glu Asn
165 170 175

Ser Phe Met Thr Ala
180

<210> 7

<211> 180

<212> PRT

<213> Homo sapiens

<400> 7

His Ser His Arg Asp Phe Gln Pro Val Leu His Leu Val Ala Leu Asn
1 5 10 15

Ser Pro Leu Ser Gly Gly Met Arg Gly Ile Arg Gly Ala Asp Phe Gln
20 25 30

Cys Phe Gln Gln Ala Arg Ala Val Gly Leu Ala Gly Thr Phe Arg Ala
35 40 45

Phe Leu Ser Ser Arg Leu Gln Asp Leu Tyr Ser Ile Val Arg Arg Ala
50 55 60

Asp Arg Ala Ala Val Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe
65 70 75 80

Pro Ser Trp Glu Ala Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro
85 90 95

Gly Ala Arg Ile Phe Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro
100 105 110

Thr Trp Pro Gln Lys Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg
115 120 125

Arg Leu Thr Glu Ser Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser
130 135 140

Ala Thr Gly Gln Ala Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln
145 150 155 160

Ser Ala Ala Ser Cys His His Ala Tyr Ile Val Leu Cys Ile Glu Asn
165 170 175

Ser Phe Met Thr
180

<210> 8

<211> 179

<212> PRT

<213> Homo sapiens

<400> 8

Asp Phe Gln Pro Val Leu His Leu Val Ala Leu Asn Ser Pro Leu Ser
1 5 10 15

Gly Gly Met Arg Gly Ile Arg Gly Ala Asp Phe Gln Cys Phe Gln Gln
20 25 30

Ala Arg Ala Val Gly Leu Ala Gly Thr Phe Arg Ala Phe Leu Ser Ser
35 40 45

Arg Leu Gln Asp Leu Tyr Ser Ile Val Arg Arg Ala Asp Arg Ala Ala
50 55 60

Val Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe Pro Ser Trp Glu
65 70 75 80

Ala Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro Gly Ala Arg Ile
85 90 95

Phe Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro Thr Trp Pro Gln
100 105 110

Lys Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg Arg Leu Thr Glu
115 120 125

Ser Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser Ala Thr Gly Gln
130 135 140

Ala Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln Ser Ala Ala Ser
145 150 155 160

Cys His His Ala Tyr Ile Val Leu Cys Ile Glu Asn Ser Phe Met Thr
165 170 175

Ala Ser Lys

<210> 9

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 9

tctctcgaga aaagagactt ccagccggtg ctc

33

<210> 10

<211> 537

<212> DNA

<213> Homo sapiens

<400> 10

gacttccagc cggtgctcca cctggttgcg ctcaacagcc ccctgtcagg cggcatgcgg

60

ggcatccgcg gggccgactt ccagtgcctc cagcaggcgc gggccgtggg gctggcgggc

120

accttccgcg ctttcctgtc ctgcgcctg caggacctgt acagcatcgt gcgcgcgtgcc

180

gaccgcgcag ccgtgcccatt cgtcaacccctc aaggacgagc tgctgttcc cagctggag

240

gctctgttct caggctctga gggtccgcgt aagccccgggg cacgcacatctt ctcccttgac

300

ggcaaggacg tcctgaggca ccccacctgg ccccagaaga gcgtgtggca tggctcggac

360

cccaacgggc gcaggctgac cgagagctac tgtgagacgt ggcggacgga ggctccctcg

420

gccacgggcc aggcctccctc gctgctgggg ggcaggctcc tggggcagag tgccgcgagc

480

tgccatcacg cctacatcgt gctctgcatt gagaacagct tcatgactgc ctccaag

537

<210> 11

<211> 178

<212> PRT

<213> Homo sapiens

<400> 11

Asp Phe Gln Pro Val Leu His Leu Val Ala Leu Asn Ser Pro Leu Ser
1 5 10 15

Gly Gly Met Arg Gly Ile Arg Gly Ala Asp Phe Gln Cys Phe Gln Gln
20 25 30

Ala Arg Ala Val Gly Leu Ala Gly Thr Phe Arg Ala Phe Leu Ser Ser
35 40 45

Arg Leu Gln Asp Leu Tyr Ser Ile Val Arg Arg Ala Asp Arg Ala Ala
50 55 60

Val Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe Pro Ser Trp Glu
65 70 75 80

Ala Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro Gly Ala Arg Ile
85 90 95

Phe Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro Thr Trp Pro Gln
100 105 110

Lys Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg Arg Leu Thr Glu
115 120 125

Ser Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser Ala Thr Gly Gln
130 135 140

Ala Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln Ser Ala Ala Ser
145 150 155 160

Cys His His Ala Tyr Ile Val Leu Cys Ile Glu Asn Ser Phe Met Thr
165 170 175

Ala Ser

<210> 12

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 12

Arg Ala Gly Pro Lys Leu Pro Gly Glu Ser Gly Ser Phe Leu Ala Glu
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